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HOUSEHOLD ARTS FOR JUNIOR HIGH SCHOOLS[1]

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Should we teach household arts in junior high schools? Should we require it of all girls or leave it as a free elective? Should it be given about ten per cent or preferably thirty per cent of school time? Should we make it an exacting and strenuous, or an amateur and play-like, subject? Should we especially emphasize practical skills, or technical knowledge, or ideals and appreciations?

But there remain more fundamental questions. What do we mean specifically by household arts? What are its values—cultural, healthful, civic, vocational—to girls of junior high school ages? What are the other values—in arithmetic, English language, music, hygiene, general science, history, geography—all of more or less importance, that must be sought on behalf of these girls, through their schooling? Are all junior high school girls substantially alike as to their abilities, interests, prospects, and needs? What relationship can household arts be made to bear towards self-service in personal hygiene, thrift, right living, life guidance; towards the vocation of assistant homemaker, as daughter or domestic; or towards full responsibility homemaker, as wife and mother, or, occasionally, as wage-earning housekeeper? None of these questions are as yet adequately answered in the technical literature of education. We can, however, obtain some light on them by applying to their study certain devices of sociological analysis.

[1] Address delivered before the Household Arts Section of the Eastern Arts Association, Baltimore, March, 1921.

First, in order that we may not be embarrassed by problems growing out of purely administrative limitations—in order, that is, that we may study problems of educational values under optimum conditions—let us assume the existence of a junior high school of 1500 pupils, receiving only seventh and eighth grades, besides all pupils of lower grades who are over 12 years of age. We will think of this as an amply equipped, ably staffed school, serving a prosperous American city of 50,000 population.

This school, then, contains the children of prosperous, comfortable, and poor parents—some recent immigrants, the majority of white "native stock." Nearly all the boys and girls over 12 and under 14 or 15 are here—the super-average, the average, and the sub-average in intelligence. Some will eventually go through college, some will leave to go to work just after their fourteenth birthday. Four-fifths of the girls will be "gainfully employed" for a few years after leaving school. Ninety per cent of those of lower economic station, and seventy per cent of those of higher economic station will marry before twenty-five. Of those who marry, perhaps half, by any reasonable standards, will become good, but not best, homemakers by virtue of pick-up and trial-and-error methods, even if the schools teach nothing resembling household arts. Perhaps half will fall short of being even average good homemakers if left to home training and pick-up methods.

The seven-hundred-fifty girls of this school are, obviously, a diversified crowd, diversified as respects abilities, environments, interests, prospects. It is the business of the junior high school, the integrating function of education, to smooth out some of these diversities, and possibly to accentuate others, on the principle of "to them that hath shall be given." Let us diagnose certain social case groups.

In case group Q are nearly 100 girls of whom the following facts are substantially true: they come from prosperous or comfortable homes; they are above the average in intelligence, mentality, or ability, however named; they will almost certainly go through high school, and many will go to normal school or college; their homes give them little mastery of the executive or "doing" side of home crafts, but do give them a large stock of appreciations of good dress, good food, clean rooms, social behavior, and orderly households. From their homes, too, they get a goodly stock of habits and some ideals of hygienic and sanitary practices. They have now little feeling of responsibility for the home, or vital interest in their own later home life. They dearly love "good

times" and take comfortable homes for granted as they take air and city water. It may be a reasonable expectation that, as women, they will have none too good health, either as gainful workers or homemakers. Their ambitions will tend to outrun their physical and financial powers, and not a few will deliberately evade the serious responsibilities of homemaking and family life from social selfishness or under the mistaken assumption that other things are much more important. Some will in mature years become civic workers of a high order.

Case group R consists of the daughters of prosperous families, but afflicted with less than average intelligence. Their parents will probably keep them in schools of one kind or another until they are 18, or even 20, but they cannot graduate from high schools. Not a few of these will be selfish, self-indulgent, extravagant, foolish. Some will find work in clerical positions, or salesmanship; and some will remain as dependents. A large proportion will marry, and their homemaking will be variable.

Case group S consists of 100 girls of less than average ability from the poorer homes of the city. Few of these girls will remain in school after the period of compulsory school attendance comes to an end. They will seek wage-earning work in factories, ten-cent stores, and restaurants. All but a few will have married by 24, mostly to artisans, railway workers, clerks on inferior wages. Their homes will be cramped, and as children increase, their lives will tend to become dingy, a bit sordid, and lacking in serenity, at least as judged by standards of social workers.

Case group T consists of at least 50 girls of superior or higher intelligence from low economic surroundings. These will move rapidly through to the high school where many will take stenography, and a few will prepare to teach. They must become at least self-supporting by 16 or 18 and may even be called upon to help support their families. Not a few will tend to overwork their none-too-strong bodies. They will become ambitious to marry above their fathers' station, and a considerable proportion, not finding just what they want, will prefer celibacy with its independence and higher standards of dress and amusements.

While these case groups will in actual practice more or less blend into each other, it is practicable, nevertheless, to consider them separately for the purposes of curriculum making, and, in so large a school as that here postulated, it would be easily and economically practicable, by

elective or alternative studies, to vary the programs of the different groups, in so far as parents and teachers might agree upon differences of abilities and needs.

It is not practicable here to analyze all the curriculum offerings or requirements that the junior high school should make on behalf of these various groups. But it ought to be clear that the partisans of no one subject—whether that be grammar, music, French, civics, or household arts—can hope finally to settle, by themselves, the place and scope of their favorite study in the curricula to be offered. In fact the proponents of household arts ought no more to be expected to settle questions of the social need of their subject than a cook should determine a man's need for a meal, or a tailor a man's need for a new suit.

The junior high school ought, doubtless, to require all of these girls to study some essentials of civics and American history. Whether it should require all, or only the backward in spelling, handwriting, hygiene, and arithmetic to take more of these subjects than they have had in their first six grades depends, obviously, upon what we agree to require as desirable minimum standards in these subjects—something that we have not yet dealt with by scientific methods.

We have good grounds for believing that no strictly vocational education, in the sense of training, is practicable or desirable during this under-fourteen period. The girls who go to work at or soon after 14 will usually enter specialized vocations for which a few weeks of specific training, apart from the junior high school, would give all the preparation practicable at this age. But it ought to be expected that at 17 or 19 or 22 many of these girls could and, given facilities, will "come back" to specific vocational "upgrading" schools for adjustment to adult vocations. A few hours, probably thirty, or sixty at most, might well be devoted to vocational guidance during the six months next preceding departure from the junior high school.

Since this paper states the results of a quest for educational values, let us clear the way by assuming (what the present writer believes is the correct solution) that in this junior high school: (a) no household arts is prescribed for all pupils; (b) all girls are required to take a course each year (equal to sixty clock hours) of hygiene, plus needed physical training; and (c) each girl is given opportunity to elect, as alternative to other courses, one or two household arts courses from the three that are offered, as described below.

What household arts or related courses might such a school offer? The following at least are theoretically feasible:

a. Two "Home Self-Service" courses, A for 7th grade and retarded girls, and B for 8th grade, 90 hours each, designed especially to teach wage-earning girls or those who are later to become college girls to care for their own health, finances, apparel, associations, and general living conditions. They emphasize instruction in such technical matters as food values, wholesome recreation, and rest; and training in short units of clothing upkeep and renovation, laundry, and possibly light food preparation, to which is added instruction in right buying, simple personal accounts, and possibly social recreation. Some of the powers and appreciations thus acquired will obviously carry over in part into later homemaking. But it is a mistake to call this work homemaking, since the essence of true homemaking is service to others, and only incidentally to one's self. Besides, this is not the age at which we may expect motives (except amateur) for homemaking to be active, except in rare cases; whereas a substantial proportion of the girls, especially from poorer homes, may have very genuine motives for "home self-service."

b. Two courses, C and D "Household Arts for Amateurs," maximum of 180 hours each year, would use the scouting spirit, involve little drudgery and many attractive projects, accompanied by much alluring reading about homes, foods, children, parties, house care, nursing, home gardening, pets. A general cultural course designed to enrich experience first of all, but secondarily to give appreciations of homes, homemaking, and modern scientific and artistic achievements in domestic fields. Where cooperation of homes could be secured, projects—meal preparation, cake making, child care, room care, furniture renovation, laundry, garden, dressmaking, entertainment—would be developed from the school, approved by the mother, and executed by one or a group of pupils under supervision of the teacher. Not only should not such courses be required of all, but no particular projects or readings should be required of all alike. The utmost flexibility should prevail. Pupils failing to take hold properly should simply be asked to withdraw, at least for a time, since they disturb the proper voluntary spirit.

c. A "Technical Homemaking" course, E, 180 hours, 4 hours per week for one year, but open to mature girls of 7th or lower grades, as well as 8th grade girls. A course as rigorous in its methods as arithme-

tic, based upon careful study of a central text book, supplemented by laboratory practice, and calculated to give a store of knowledge, and some ideals, rather than skills. Such a course should give much information about modern advances in homemaking—buying, food values, child health, use of power driven appliances (not overlooking that American urban homes have generally achieved two at least of the greatest labor saving devices ever invented—piped water supply and piped sewage disposal), art in domestic life, the deeper social significance of home and family life. It is the writer's belief that such a course as this would appeal to fifteen or twenty per cent of girls, especially the more imaginative and ambitious, and would give them at least as much profit as their grammar and arithmetic do now, and more than will the later physics and foreign language. Such a course should never be a required course. In a small school, however, administrative limitations in respect to alternatives might make it, if the one chosen to be offered, in effect required, but that is due to poverty of opportunity, not educational need.

Let us assume our school equipped with a good advisory service. What courses would these advisors recommend to the girls most nearly representing the various case groups?

For case group R they would recommend courses C and D—Household Arts for Amateurs. They would do this in the expectation that these girls have yet several years to spend in schools, and are practically certain to study some kind of "hard" home economics later. Furthermore it is important that these girls of meagre endowment, but favoring environment, be stimulated along lines of high grade practical arts activities to offset the discouragements they experience from failures in abstract studies.

For case group S, would be recommended Home Self-Service courses A and B, on the assumptions: (1) that these girls, because of their environment, have much to learn as to care of health, earnings, characters; (2) that, going soon into wage-earning work, they will cease to be interested in the executive side of homemaking, although as boarders and in self-supporting capacities they may be expected to develop a wide variety of tastes and appreciations of good, fashionable, and perhaps costly things; (3) that if society is wise it will offer very concentrated and practical full-time courses in homemaking (8 hours daily for perhaps three months and based chiefly on the out-project method—productive projects away from homes—and preferably not in the girl's

own home) at ages 20–25, preferably just preceding marriage, supplemented by very practical afternoon extension courses for them after they begin homemaking.

c. For case groups Q and T, recommendations would vary according to individuals. But, given the opportunity of electing course E as an alternative to an advanced course in arithmetic, or a foreign language, or English grammar, it is certain that many of these bright girls would take the "hard" technical course E, especially as it is not certain that with their ambitions they can or will pause for similar work later in school or college. Many of these girls will become intellectual leaders. From some of them will come future teachers of home economics. If they are to be saved, in a physical sense, from themselves, they should early acquire better perspectives as to health values, maternity values, and sound home social values than are now acquired by our ambitious, conscientious, energetic, middle class daughters. They may be expected to control their future environments and conditions more on the basis of "reason and science" than on the basis of faiths and skills.

But none of the courses should be closed to girls from any case group, except for two reasons: (a) they need the time for other studies more essential to their purposes, if these are defined, or to "make up" deficiencies; and (b) after entering a course they fail to develop the proper spirit, important in all courses, or the required ability (a warrantable exclusion only from Course E). On the other hand, I see no reason why any girl should be required to take any of the courses named if the school is large and rich enough to offer useful alternative courses.

If we can once agree upon certain fundamentals of educational aim by the methods of study illustrated, we shall then be ready to pass to a consideration of situations involving administrative or other limitations.

What, for example, should be done in a small junior high school? What, at a time when perhaps we can obtain no acceptable teachers for courses A, B, C, D? What in a school (e.g. colored girls) where work of this character is socially "taboo?" What in a school without laboratory equipment? What in a school whose authorities are so strong on "higher" arithmetic, verbal history, English grammar, multiple-fact geography, and the rest, that no time remains for household arts?

The writer will not now undertake to deal with these questions. But he must urge that the time is passing when the partisans of special subjects will be permitted to be the chief pleaders for their favorites.

Home economics teachers are, of course, specialists in knowledge of how home economics should be taught; they should be able to give us a large amount of knowledge as to the usefulness of these subjects; but neither they nor other specialists must usurp the prerogatives of deciding on comparative values. For some girls French may be much more worth while than home economics; but the French teacher cannot decide this and neither, I think, can the home economics teacher. Compulsion is nearly as bad in education as in politics, religion, or marriage. The writer is willing to compel the taking of any subject to any degree of proficiency in any school or for any college where experts in educational values have agreed upon the value of the subject for the type of student concerned. But in view of our present stupendous ignorance of educational values above the primary grades (and the problem is only partially solved there) it appears to him a violation of all sound policies to require certain studies of all—whether those be Latin, algebra, military drill, needle work, household arts, or general science.

CLIFF DWELLER'S BREAD

Some five hundred or more years ago, one of the original Americans, a dweller of the cliffs in what is now Mesa Verde National Park, Colorado, forgot to eat his supper, and Dr. J. Walter Fewkes, archeologist of the Smithsonian Institution, has found the cereal portion of it. Through all these years, the dry air of that region has preserved this ancient, fried corn bread, made into a form similar to the modern American griddle cake or the Mexican tortilla.

This ancient food was found on the plaza of Oak-Tree House, one of the many cliff dweller ruins that Dr. Fewkes has unearthed and reconstructed. He also found the slanting stones between which the housewife of the ancient community crushed the corn; and even the straw brush used in scraping up the corn meal had lain near by through the centuries.—*Science Service.*

SANITATION IN FOOD PRESERVATION[1]

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While dirt cannot now be regarded as the breeding place and origin of most infectious diseases, it just as certainly does play an important part in the modern problem of food preservation and food distribution of which the canning industry is such an essential feature.

The process of preserving food by heat possesses the enormous advantage that the vast majority of known disease germs are killed by even a few moments' exposure to the temperature of boiling water. The use of heated food, therefore, constitutes one of our greatest safeguards against the entrance of disease germs and other parasites through the alimentary tract. The thorough cooking of pork is known to protect against the dreaded trichinosis due to the parasitic worm trichinella. It is well known that many of the most famous instances of food poisoning have occurred after the use of raw or partly cooked foods, such, for example, as the sausages and other meat preparations made from uncooked animal tissues and used widely in Germany and some other European countries. These outbreaks of food poisoning are due in many cases to certain bacteria resembling the typhoid bacillus which are present in the uncooked food. In some of these outbreaks the fact stands out clearly that only those individuals who have eaten the meat raw or imperfectly cooked have been affected, while others who have partaken of meat from the same animal after thorough cooking have escaped altogether.

In this country, where the use of uncooked meat foods is relatively uncommon, outbreaks of meat poisoning of this type have been rarely reported. It is no wonder that sanitarians have long recognized the value of thorough cooking in preventing infections, and that the application of high temperatures to the preparation of food has been called "the greatest sanitary step ever taken by the race." The men of the Old Stone Age do not seem to have cooked their food, but in the later period, 10,000 or 12,000 years ago, cooking utensils of various kinds were apparently in common use.

[1] Address delivered before the Fourteenth Annual Convention of the National Canners Association, Atlantic City, January, 1921.

While there is no doubt that the heating of food is an important defense against infection, the large-scale preservation of food by heat has met with certain practical difficulties. One of these is the difficulty, not so great now as earlier, of hermetically sealing the heated food. If the container is not air-tight, every housewife and every canner knows that air and the germs may enter and cause spoiling. In the commercial industry of canning at the present day I understand that while leaky cans sometimes occur they are relatively uncommon.

Far more serious than the problem of imperfect containers is the occasional failure to destroy the germs in or upon the food product. This is due to the occurrence among bacteria of certain highly resistant bodies called spores. Not all bacteria produce spores and the true significance of spores in the life of bacteria is not fully understood, although they seem to be a sort of protective device for tiding the species over a period of hard times. Some of them are extraordinarily resistant. I had in my laboratory at one time a bacterium the spores of which would withstand boiling for 16 hours. It is the spore-producing bacteria that make most of the trouble in the canning industry, and the origin and distribution of these forms are consequently of great practical importance. It is a piece of good fortune for the human race that relatively few of the disease germs affecting man possess a resisting spore stage, and in consequence nearly all dangerous bacteria are killed by a few moments' exposure to the temperature of boiling water. This is true of the typhoid bacillus, the cholera vibrio, the ordinary germs of blood poisoning, and most other forms.

There are three or four exceptions that should be mentioned: the bacillus of anthrax, a disease communicated from cattle or sheep to man, generally transmitted by wool or hides, and apparently very rarely if at all by food products; the bacilli of lockjaw and of gas gangrene which enter the body through a wound and not so far as known, from the stomach or intestines; and the bacillus of botulism which forms its poison outside the human body and does not as a rule appear to invade the tissue. It is the latter only, B. botulinus, whose presence in food heated at high temperatures has been definitely shown to cause poisoning and death. The bacilli of lockjaw, gas gangrene, and botulinus, as is well known, belong to a group of bacteria characterized by their ability to grow in the practical absence of free oxygen (far below what is needed by the ordinary bacteria). This group of anaerobes, as they are called to distinguish them from the aerobes of oxygen-needers,

is a difficult one for bacteriologists to study, and our knowledge of them is still very incomplete and unsatisfactory. It is, however, just this group of anaerobes that is of greatest significance in the canning industry. While the spores of oxygen-needing bacteria, even if they survive the heating process, are not able to multiply in the air-tight can, the spores of anaerobes do sometimes find favorable conditions for development and accordingly multiply until the contents of the can are spoiled or even, as in the case of B. botulinus, an intensely virulent poison is produced.

There is reason to suppose that the favorite habitat of some of the best-studied anaerobic bacteria is the intestinal tract of warm-blooded animals. The bacillus of lockjaw, for example, seems to have a special predilection for the intestinal tract of the horse, and furthermore certain individual horses harbor a much larger number of tetanus spores than do others. It has long been known that manured soils contain a high proportion of anaerobes, and the experience of the fighting armies on the long cultivated fields of Flanders and Northern France has shown us again how terrible under such conditions may be the infection of war wounds with the anaerobic bacteria of tetanus and gas gangrene. Recent observations in California on the distribution of B. Botulinus spores in nature, although not completed, are highly suggestive. In one instance the owner of a small vegetable garden grew string beans and canned them in the household without any spoilage over a period of eight years prior to 1918. The garden was fertilized with animal manure in 1918, and, while the beans grown that year were canned by the same method as previously, they spoiled and some jars contained the botulinus toxin.

Here we see the significance of the derivation of the word dirt from *drit*, excrement. Since all the available evidence indicates that the germs that interfere most seriously with the efficiency and safety of the canning process occur with particular abundance in the excreta of various animals, measures of sanitation in connection with canning may well be directed with special emphasis to avoiding this source of contamination.

There is good reason why all foods intended for canning should be freed so far as practicable from any particles of manured soil that may adhere to them when gathered, and why in the immediate neighborhood of a canning plant especial care should be devoted to the proper disposal of all animal excretions. This is particularly true in the case of those foods which, for one cause or another cannot be advantageously

treated at very high temperatures. When it is possible to use very high temperatures, as is done in the case of ripe olives which can be heated to 240° F. and kept at that temperature for 40 minutes without injury, both the danger of spoiling and the danger of botulinus poisoning may be entirely eliminated.

While the safeguarding of the public health and the prevention of economic loss from spoilage are and must continue to be the prime aims of sanitation in the canning industry, the question of simple cleanliness is one that cannot be wholly overlooked. Civilized man is no longer content to use a common drinking cup or dry his hands on a much-used roller towel. He likes also to sit down at a table provided with a clean table cloth and to eat his food out of spotless dishes with spoons and forks of shining silver. He has lately shown signs of interest in the cleanliness of the methods used in the preparation and transportation of his food, as well as in its serving. He does not like to see street dust blowing over loaves of unwrapped bread and he wishes to feel assured that all his food is prepared and handled under reasonably cleanly conditions, even though it may not be possible to trace any specific diseases to various untidy practices. Here is one of the great opportunities for sanitary achievement in the methods of food preservation.

There is of course a possibility of trouble here which has doubtless been foreseen by many. It is that so many and so expensive sanitary requirements may be established that the cost of food may be raised beyond a reasonable point. The absolutely necessary health requirements can be met quite simply and at moderate cost. Everything beyond this is deserving of the most careful consideration. The degree of cleanliness upon which one insists in one's everyday surroundings is determined by one's pocketbook as well as by one's preferences. Gilding the lily has an economic as well as an esthetic side.

The milk business offers a familiar example of the desirability of scrutinizing proposed sanitary requirements. We are now told by the bacteriological students of milk production that the main source of bacterial contamination lies in the utensils, and that the character of the barn and hay lofts is not so important as once supposed. It has been shown that sanitary milk of low germ content may be produced with a relatively simple and inexpensive equipment, and that elaborately costly surroundings do not increase proportionately the hygienic value

of the product. It is well therefore in each case to determine whether the advantages of a given procedure are commensurate with the expense.

I cannot let slip the opportunity of calling attention to the necessity of using bacteriological methods to determine the ways and means of sanitation. Since all the known dangers from food infection and from food spoilage are due to microbes, it is evident that a study of the life history of the microbes, of their resistance, of the physical and chemical conditions of their life, and of the places in which they are found must constitute the very essence of sanitation. For unless sanitary measures are directed towards the control and suppression of germ life they are quite without meaning. We must know where and how to strike, and we must follow in the laboratory the results of such methods as are put into effect in order to know whether they are achieving the desired end. Bacteriological studies furnish the only means of knowing where to direct our efforts. The introduction of sanitary methods without knowing whether they are precisely what is needed or whether once in operation they are reasonably effective may lead to much loss of time and energy. The fullest knowledge of the problem is desirable.

To summarize the trend of opinion on food sanitation it may be said that first of all come measures designed to promote the safety of food products. Few food industries are in a position to satisfy this requirement so completely as those engaged in food canning. Exact experiments in many laboratories have shown the degree and period of heat exposure necessary to insure the certain destruction of all dangerous bacteria. Among the other measures contributing to protection against dangerous spoilage few have so much to recommend them as the removal of particles of manured soil by thorough washing with clean water. The cleaning of all vegetables, fruits, and other foods before canning will give some protection against the introduction into the canned food, not only of germs dangerous to health, but of the germs that cause simple spoilage with its consequent economic loss. Finally, sanitary measures may well be directed to securing, in addition to the perfect safety of canned foods, a reasonable degree of cleanness so that the average consumer may be assured that at least the same amount of care and skill has been used as would be used in his own home.

THE EXTENSIONIZED FARM WOMAN

The Point of View of a Farm Woman

ANNA GILBERT

Much interest and wide publicity was given to the report of the farm home survey conducted last spring by the United States Department of Agriculture. This was a survey of conditions in about ten thousand farm homes, and was intended as a basis upon which to plan the extension work needed by farm women.

That the condition of many farm homes is in grave need of study and help from competent workers, such as those in extension service, is beyond dispute. To us women, however, who are being extensionized, it seems as if the workers were endeavoring to look from without, in, and not from within, outward. It is hard to realize how different the farm life is from life in city homes until one has experienced both.

There is an insistent demand upon the time of the farm woman, from sunrise until long after sunset. Each morning is begun with a renewed hope to get ahead with the work and have a little free time, or "vacant" periods, but at night there is the depressing realization that little has been accomplished beside the regular and urgent routine. There are many daily duties of farm women of which city women have no conception, and also many are much harder to accomplish because of the way in which farm houses are built and used.

Farm homes, in many cases, are still in a transition stage between colonial days, when all production and preservation of food and manufacture of clothing took place within the home, and the present city conditions in which as little as possible of either is done in the home. Now, in these days of higher-priced labor and scarcity of help, the foremost question should be, "Is the work that is carried on essential to the advancement of farming as a business?" Either directly in conservation or production of farm wealth, or indirectly in conservation of the women's health and contentment on the farm, we should clearly distinguish between what is essential and what is non-essential from a business viewpoint. One must bear in mind that not only are farm women conservers of what farmers earn, but they are to a very large extent producers of wealth. Farm women are in business partnership with their husbands as is no other class of women. The work of the farm is the farm life, not part of farm life, and one comes to enjoy it and to be glad to help in making it a success.

Yet it is true that only by eliminating a part of all the various activities, now carried on in the farm home, can there be evolved a reasonable day's work with a reasonable amount of time for leisure and social life. For instance, let us take canning. During the war there was a nation-wide appeal to can all surplus food. Extension experts showed us how to can everything on the farm from a carrot to a chicken. Farm women as well as city women entered into the work with admirable spirit, and conserved great quantities of produce. Is it necessary and wise now, however, for farm women to can, pickle, preserve, and dry food as in colonial days? Surplus food from the garden can always be marketed at canning factories or used on the farm for feeding poultry and stock. My neighbor last summer put up forty quart cans of red raspberries when we could sell them fresh for forty cents a quart. Allowing for shrinkage, the market value of the berries she used was about $32. What would a doctor or a lawyer say to his wife if she went to the market and bought $32 worth of raspberries to can?

One must become farm-minded to see the reason for many customs in farm homes. Why do the women, instead of the men, wash the cream separator? Let me ask, would it pay a business man to leave four or six horses standing and his "hired man" idle,—for hired men do not work automatically—and take one-half hour of his time to wash the separator, provided the water is heated ready in advance? In the summer, you must remember, the time of a man and team is worth from $6 to $10 a day. The establishing of more creameries and skimming stations will soon do away with home separating.

We wonder why the extension workers do not realize that our life scheme is entirely different from that of city women. The surveys and reports emphasize the divergence of our life from that in a city as if we should use that as our standard. There should be two separate and distinct standards, for our conditions must necessarily be different.

Extension workers often have urged us to make and remodel clothing for the family. Could they but attend the Ladies' Aid Society and see the number of homemade creations, they would go away with a devout wish that what had been done might have been left undone. The clothes problem is a large one on the farm. I know of no other one thing that takes more of my time than keeping my family mended and clothed. Very often the next season has arrived before I have prepared all around for the preceding one. I can see no well-grounded reason why farm women should make their clothing to any great extent. In

fact many reasons point to the contrary. We are too busy to study modes, styles, cuts, and materials. We do not need so many garments as city women, and we wear the better garments so seldom that they are old-fashioned before they are worn out. We need instruction in the choice of clothing in order to get colors becoming to sunburnt skins, materials that shed the dust, and styles that are simple but pleasing. Just now the home demonstration agents are teaching how to make dress forms for home sewing. If I took the time to make one, I am afraid that I should feel that I had to use it. Why not show where we could buy, through the mail or at local stores, pretty suitable things? Do you know how much we buy through the mail because of its convenience, and mostly from one firm which illustrates glaring bargains of cheap goods? Few farm women know the names of merchants who sell through the mail a better grade of goods. Without doubt farm women are not well groomed, and yet I feel that we could be if farmers received higher prices for their produce and we swing away from home dressmaking again. Does it pay to spend much time darning stockings, if the same time spent caring for the chickens will increase the egg yield?

A striking variation from city homes is the farm kitchen. Besides being the place for preparing the meals, in winter it is the laundry, the dining room, the "wash-up" room, and the drying-out room. My kitchen does not look pretty when one wall is hung with dusty old work-coats and sweaters, but who wants to put on a freezing cold coat at five o'clock in the morning? In winter, milk cans lined with frozen milk often stand around the range. One looks forward to the time when there will be a campaign for the coatless kitchen, and a drying and thawing-out room with a register. That farmhouses have not the modern conveniences of city homes is everywhere conspicuous, but the improvements in farm homes have been so rapid of late years, and the manufacture of equipment suitable for rural homes has increased so largely, that we should expect to see a noticeable advance in modernizing farm homes in the next few years.

Although we farm women need much help in solving our daily work problems, we would not exchange our farm life for that in a city. We enjoy the work, and we feel that we are a part in the accomplishment of the big agricultural production which is making for national wealth.

THE SOVEREIGN STATES AND THE FESS HOME ECONOMICS AMENDMENT

LOUISE STANLEY

Chairman, Legislative Committee, American Home Economics Association

"Does your state desire the passage of the Fess Home Economics Amendment? How will such legislation benefit your state?"

Propounding questions like these, the American Home Economics Association addressed the sovereign states of our union, asking for an expression of opinion on the value to them of the passage of this amendment to the Smith–Hughes Vocational Education Act of 1917. Hon. Simeon D. Fess of Ohio introduced the measure in the last Congress as H. R. 12078 and has reintroduced it in the Sixty-seventh Congress as H. R. 21.

The Smith-Hughes law provides for cooperation between the states and the federal government in providing education for useful employment to persons over fourteen years of age along the lines of agriculture, trades and industries, and home economics. The law provides certain amounts of federal funds to be appropriated annually for the promotion of agriculture and industrial training; it further stipulates that one-fifth of the funds allotted to any state for industrial training "may" be allotted to home economics. Hence, for the fiscal year, 1921–22, agricultural training and industrial training will each receive $1,500,000, while home economics "may" receive $300,000, or one-fifth of the fund appropriated for industrial training. The Fess amendment equalizes the amounts appropriated to each of the three lines of education.

Furthermore, the act of 1917 provides that the federal moneys shall be allotted to the states on the basis of *urban* population. Home economics education is governed by the same rule, notwithstanding the fact that there are homes in the country as well as in cities and towns. The Fess Amendment provides that the funds for home economics education shall be apportioned on the basis of *total* population.

Again, the existing law prescribes that home economics education shall be governed by the regulations which control industrial education. This is much like trying to run a home on the rules which govern a factory. By the provisions of the Fess Amendment, home economics education is empowered to set up its own regulations and consequently to develop along the individual lines of homemaking.

In response to a letter sent by the American Home Economics Association to state directors of vocational education, came replies of greater or less elaboration of detail, but all of these replies may be roughly classified as expressing four major reasons why the states would benefit by the passage of the Fess Home Economics Amendment.

1. We need the money. We have more applications for home economics classes than we can supply with the funds at hand.

2. The trade and industrial regulations are hampering for two reasons: the allotment of funds on the basis of urban population is unfair to the country homes; the regulations governing trade and industrial education do not fit home economics education.

3. Home economics education is an Americanization measure. It helps the foreign-born women. Homemaking training helps the poor to use their slender resources to better advantage.

4. The standard of home economics education is raised by the fact that schools receiving federal aid must measure up to a required standard. With more funds there will be more high-grade schools.

The specific statements of the different states are varied and interesting.

Missouri writes that she now has vocational home economics in forty high schools and can place it in 200 high schools if the Fess Amendment becomes a law. Florida has four schools receiving federal aid for home economics classes and at least twenty-five schools waiting to receive aid. Kentucky says that she can easily spend ten times the amount of money now received. Oregon writes that she already is spending out of state funds five times as much as the amount of federal funds received. The law obliges a state only to match the federal appropriation with state or local funds.

Kansas sees that the provisions of the Fess Bill are along the lines of "proper national economy." Kansas has forty-five schools in vocational agriculture; eleven centers and forty-seven evening classes for trade and industrial work; and only seven day schools and thirteen evening classes in home economics—all because of lack of funds.

Maryland makes a specific statement. "We have reached the limit and cannot further promote the work until additional funds are available. None of the vocational home economics departments in the various high schools of the state will be able to receive subsidy for the last quarter. There are only eight day schools receiving benefit from federal aid and yet the funds are exhausted with payments covering only three quarters. The shortage is about $2000 on these schools besides evening work to

the extent of $2500 in the city of Baltimore which will be compelled to go without subsidy."

North Dakota says: "The available (federal) funds for North Dakota are only $1000 for the entire state. This is not sufficient to reimburse two schools on a 50-50 basis; we have ten applications for aid for every one which we can reimburse."

North Carolina complains of "lack of funds and trained teachers." "We could put a vocational teacher of home economics in every large type school in the state if the money was available. . . . . Of course, as more money becomes available, we can train more teachers."

Arkansas sees that increased funds for home economics, will also help agriculture because experience shows that it is easier to establish schools of agriculture if schools of home economics are established in the same building.

Ohio, Michigan, West Virginia, and New York express themselves as wishing a modification in the present regulations tying up home economics with trade and industrial education.

Ohio says: "Our home economics departments are expressing a great deal of anxiety concerning the measure. We have been hampered in the home economics phase of our vocational education because home economics has been so intimately under the industrial division, and, second, because there has been such a small percentage of funds available for home economics work."

West Virginia reveals an interesting situation. Her population is divided almost equally among farmers, miners, and manufacturers, and hence is largely industrial. But the census classifies the state as agricultural, hence trade and industrial training (and consequently home economics) receives a minimum allotment. The West Virginia legislature has expressed its appreciation of vocational education by a liberal increase in appropriations for the purpose of such education.

Michigan makes her direct statement that "home economics schools cannot be conducted on the same basis that trade schools are conducted." Michigan is in process of consolidating her rural schools. She has established home economics classes in 130 schools in larger cities and towns but needs more funds to place such classes in the smaller schools.

With the passage of the Fess Amendment and the modification of the requirements which link together home economics and industrial training, New York will be able to utilize federal funds for home economics. At present the whole federal appropriation is being put into trade and industrial education.

The reports from Wyoming and New Jersey speak not only of a need of funds but of the great value of the homemaking work among the foreign-born population. Wyoming tells of the work in the mining centers where large numbers of aliens now live. "During the past two years we have made special efforts to reach some of these people with the small amount of money available, and have been very much pleased with the results secured. In these communities the girls marry at very early ages, fifteen or sixteen years, so that they have almost no opportunity to receive instruction in home economics in regular schools, and the organization of special classes for their benefit seems especially necessary."

Montana expresses her financial plight by saying, "We can assure you that vocational education, especially in home economics, is properly appreciated and that, if some financial aid is not provided for the schools throughout the state, vocational home economics will die."

Then follows a little picture out of real life.

"That type of home economics education which can be given in the day and evening classes in the public schools does much to better living conditions in the community; and at this time, when business is poor and a family often lacks funds to properly care for its needs, this kind of education is a God-send."

What Montana has expressed is undoubtedly true in every state in the Union and in every country of the world. One of the best aids to industrious, honest American citizenship is the stir of the self-respect inspired by living in well-kept homes, wearing decent clothing, eating wholesome meals. If the poorest are raised, then all other strata will be raised. Surely a little expenditure toward the achievement of such a result is economy for any nation.

The states also submitted evidence that state organizations of varied character had endorsed the bill—organizations of parents and teachers, womens clubs, and labor unions.

The national organizations which have endorsed the measure to date are: American Home Economics Association, American Association of University Women, General Federation of Women's Clubs, Land Grant College Association, National Congress of Mothers and Parent-Teacher Associations, National Council of Executive and Administrative Women in Education, Deans of Women in Colleges of the National Education Association, Vocational Section of the National Education Association, National Grange, National League of Women Voters, National Society for Vocational Education, National Woman's Christian Temperance Union.

EXPERIMENTS IN THE MAKING OF DOUGHNUTS OF LOW FAT ABSORPTION[1]

MINNA C. DENTON AND LOUISE B. PRITCHETT

PART II

Some of the conclusions which we have been able to draw from the entire body of data collected in the course of over two hundred different experiments, in which many different recipes were tested, may be summarized as follows:

1. The proportion of flour used has a great effect upon the amount of fat absorbed during frying. A stiff dough absorbs less fat, other factors being equal, than does a soft dough. But if too stiff a dough is made, especially with a plain mixture low in fat and comparatively low in sugar such as our "standard doughnut," the crumb is apt to be firm and elastic like bread rather than tender and rich like cake, and for that reason the product is usually judged to be undesirable.

2. The kind of flour used, whether from hard or soft wheat, does not seem to have very much effect on the fat absorption in so far as these doughnuts may be used as indicators. Tests were made with four kinds of flour, ranging in strength from a Minnesota hard spring wheat bread flour, thoroughly aged, to a North Carolina soft wheat flour. The standard weights and proportions of all ingredients were used in all cases, and the dough was allowed to stand for one and one-half hours before being rolled to standard thickness and weight. The absorption was no greater for the doughnuts made with soft wheat flour than for those made with hard wheat flour, the average being 21 per cent in both cases. Any differences in manipulation or in moisture content, which might conceivably result from the different ways in which a cook may handle different kinds of flour, would, however, doubtless have important effects upon the fat absorption. In this connection, it may be remarked that the slight differences in absorption consistently shown between these two kinds of flour, when determining fat absorption of fried balls of dough (see JOURNAL, March, 1920, page 123), are lost in the larger range of experimental error due to the more complicated manipulation used in frying ring-shaped doughnuts.

[1] Published by permission of the Secretary of Agriculture.

This is the second part of the second report from the Experimental Kitchen Laboratory on the subject of fat absorption during frying in deep fat. See *Journal of Home Economics*, March, 1920, for first report; and June, 1921, for first part of second report.

3. But, though those differences in the condition of the gluten in "strong" and "weak" flours, which are highly significant in bread making, seem to have little effect upon the fat absorption during the frying of doughnuts, nevertheless we consider it is ordinarily the presence of gluten in the flour, or of a cooked starch paste, or of some other material capable of fusion into a coherent matrix, which makes possible the formation of a fat-resistant crust. For whenever any ingredient of the dough other than gluten or cooked starch is increased—whether it be egg, milk, water, sugar, uncooked starch, or fat—the fat absorption always rises. Yet it can not be assumed that water, for example, has a special attraction for fat. Conversely, whenever the amount of flour is increased, the fat absorption always falls. Furthermore when an equal weight of raw cornstarch was used to replace one-half of the flour in the "standard" mixture, the absorption was increased from an average of 24 per cent to 30 per cent. This increase we suppose was due in part at least to dilution of the gluten with cornstarch particles which lack cohesive properties when raw. (See also the discussion of these points in the former paper, referred to at the beginning of this article.)

However, it would be a mistake to attribute the crust-forming property entirely to the unassisted gluten proteins regardless of their physical condition. When gluten was separated from the flour by washing, then dried and ground to a coarse powder and used to replace one-half of the flour in the "standard" mixture, the absorption was increased to 40 per cent. But this dried gluten was very granular and hard and seemed to have lost its cohesive property. When soaked overnight it swelled greatly but still remained in granules which were with difficulty formed into a ball by kneading a very small portion for one hour. This instance is of course only another illustration of facts often pointed out in the literature of bread-making, viz., that the elastic and cohesive properties of gluten are dependent at least in part upon the soluble salts present which are removed by washing; and that the drying of a moist colloidal mass may produce certain irreversible changes in the physical condition of its components.

That the resistance to fat penetration is not due merely to the quantity of gluten present regardless of its physical condition was further shown by experimental evidence. In those experiments a gluten flour, manufactured for the use of diabetics, and containing by analysis 36.5 per cent gluten (N of crude gluten times 5.7) was used in place of the ordinary wheat flour in making up the standard mixture. The absorption

was 24 per cent and 25 per cent, respectively, in the two fryings made. These figures do not differ from the average absorption (when fried at once) of the standard mixture when made with an ordinary wheat flour, which averages 11.4 per cent protein (or 10.4 per cent gluten if gluten be assumed as N times 5.7).

It was noticeable that when the dried gluten and the uncooked cornstarch were added to the dough mixture neither of these materials entered into intimate connection with the remaining constituents of the dough; on the other hand, their particles remained visibly separate, to a greater or less degree. The results of the addition of *cooked* cornstarch or of a well-kneaded, cohesive mass of gluten, capable of thorough amalgamation with the dough, proved to be an entirely different proposition, and yielded opposite results.

On the whole, then, it seems fairly clear that reduction of area presented to the hot fat is the important consideration. Distinct particles or lumps of gluten present a relatively larger amount of surface. The pressure of an efficient "binder," such as a sticky gluten or starch paste in which all superficial particles are embedded, and which, therefore, presents a minimum area to the hot fat, results in decreased absorption. This will be the case, however, only if the dough be so manipulated that its surface remains smooth. Loose flour on the outer surface, or roughness due to a tendency to stick to the board, will alike cause increases in fat absorption.

4. Potatoes, when boiled and forced through a ricer and added to the mixture while still warm, are taken up much more intimately by the dough than are dried gluten granules or uncooked starch grains. The fat absorption during frying is decreased in this case, which involves the addition of cooked starch as well as of potato proteins. The average absorption for "standard" doughnuts to which 224 grams of riced potatoes are added (8 ounces cooked potatoes to about 20 ounces of flour) is 16 per cent (instead of the usual 24 per cent) when fried by the customary method, turning one or more times in the process of frying.

5. That gluten when "developed" or partially fused by kneading is more effective in resisting fat absorption than when it exists in separate particles, in a lightly mixed dough, was shown in several instances where the dough was rolled and re-rolled and obviously over-handled in the effort to standardize the weight and size of the doughnuts. The reduction was from 22 per cent, when every effort was made to avoid kneading, to 16 per cent fat absorption, when kneaded.

Yeast-raised doughnuts, duplicating the ingredients and their proportions as used in the "standard" mixture—with this exception, that yeast instead of baking powder was used, and that the manipulation was necessarily different,—showed an absorption of 7 per cent. There was an absorption of 17 per cent for the "standard" doughnut similarly treated but raised with baking powder, made up at the same time as was the yeast mixture, and allowed to stand at room temperature for three hours, as did the yeast-raised doughnuts. This extra ripening of the dough accounts for their lowered absorption (17 per cent instead of the usual 24 per cent). A part of the "standard" mixture (baking-powder dough) was kneaded to correspond to the kneading received by the yeast-raised doughnut. The absorption in this case was 10 per cent. This method of decreasing fat absorption, while very effective, has no practical significance in the making of homemade doughnuts leavened with baking powder; since the resulting product is exceedingly tough.

6. The cooking of the flour or flour and cornstarch before frying, as is done in making "queen fritters," reduces the absorption in very much the same way as does the addition of cooked potatoes to the doughnut mixture. Presumably the cooking of starch, when thorough enough to change the grains to a homogeneous paste, aids in the formation of a fat-resistant crust or matrix in somewhat similar fashion to the action of a gluten which is in good condition for fusion of its particles when wet.

"Queen fritters," even though a very soft mixture containing a very high percentage of fat, and though fried for a much longer period than are doughnuts, do not take up a large percentage of fat during frying (showing only 10 per cent to 20 per cent absorption); which is probably due in part to the fact that the cooking of the batter before frying thoroughly fuses the starch and gluten, thus enabling a fat-resistant crust to form quickly.

7. Other things being equal, increase of egg in the batter increases fat absorption. But an increase in egg generally calls for an increase in flour in doughnut mixtures, which often over balances the effect of the egg. Again, the increase in egg usually increases the volume by increasing the expansion during frying, which in turn increases fat absorption. The effect of decrease in egg can be easily noted in the less complicated "queen fritter" mixture, those fritters having two eggs added to a given weight of the cooked mush showing a consistently higher absorption (and also a larger volume) than do the one-egg fritters.

8. Allowing the dough to stand and "ripen" before frying, tends to decrease the fat absorption; especially when this procedure is continued over a number of hours or overnight. The standard mixture doughnut, allowed to stand one and one-half hours before frying, showed an average absorption of 20 per cent against the 24 per cent of those fried at once. In several cases allowing the dough to stand overnight in the refrigerator reduced the absorption considerably, e.g., from 22 per cent to 10 per cent. Standing for a short time makes the dough easier to handle and does not seem to have a bad effect upon the quality of the finished product, except in the case of the potato doughnut which loses lightness, since the potato stiffens in cooling. Standing overnight does seem to affect the lightness and volume of the finished product unfavorably in the case of almost all kinds of doughnut doughs, except possibly the very rich and soft ones. It must be remembered, however, that these doughs were all made with a single brand of tartrate baking powder. No experiments have as yet been tried on the effects of standing or ripening upon a dough made with baking powders of other types.

9. Reduction of the time of frying is one of the most important factors in reducing the fat absorption.

One method of reducing the time of frying is by raising the temperature of the fat. In one series, "standard" doughnuts fried for 3 minutes at 185°C. gave an average absorption of 22 per cent fat; while doughnuts from the same mixture fried at 205°C. for 2 minutes absorbed 15 per cent fat. The high temperature made the "standard" mixture excessively brown; but when a doughnut mixture was made in which the sugar was reduced one-half and the flour reduced 45 grams, all other ingredients remaining the same as in the "standard" mixture, the high temperature did not cause undue browning. Frying at 210°C. did, however, seem to toughen this two-egg doughnut. Doughnuts of this same series fried at 185°C. for 3 minutes absorbed 18 per cent of fat, while those of the same mixture fried for 2 minutes at 210°C. absorbed 11 per cent of fat.

Another method of reducing the time of frying is to submerge the doughnut during the frying period. This method is used by some commerical bakeries where doughnuts are made in large quantities, the doughnuts being forced under the surface of the fat by means of a wire screen sinker. In the Experimental Kitchen a device similar in principle, consisting of a round disc of galvanized wire netting with a heavy wire plunger attached to the center, was used. An ordinary wire frying

basket with a bail, if slightly smaller than the frying kettle, could be used in the same way to force the doughnuts under the surface of the fat as soon as they begin to rise to the surface, and keep them submerged.

"Standard" doughnuts from a batch of dough that showed 19 per cent absorption, when the doughnuts were allowed to float, showed only 13 per cent when submerged.

"Standard potato" doughnuts, when fried by submerging for one and one-half minutes at 185°C., absorbed 12 per cent of fat; while doughnuts of the same mixture fried at the same temperature for three minutes, floating in fat and turned once or twice during frying, absorbed 15 per cent of fat. (See also paragraph 3 under Practical Suggestions.)

10. Since all parts of the surface of the doughnuts are equally exposed to the hot fat when kept completely submerged, the doughnuts expand evenly, showing much less tendency to crack than when allowed to float during the frying process. The doughnuts fried by this method, if made from a soft, well-mixed dough with a smooth surface, are usually glossy and have a soft, tender crust of uniform color, so that they are unusually attractive in appearance. However, a large or thick doughnut should not be kept submerged while frying, since the time could not be shortened sufficiently, in this case, to reduce the fat absorption. Submergence without reduction of time of frying would, of course, only increase the fat absorption, since there is an increased surface exposed to the action of the hot fat, during submergence.

PRACTICAL SUGGESTIONS FOR THE HOME FRYING OF DOUGHNUTS OF LOW FAT ABSORPTION

1. Reduction of the proportions of fat, sugar, and egg in the doughnut mixture decreases the amount of fat absorbed, provided the amount of flour used is not too greatly decreased at the same time. A plain doughnut mixture, such as the "standard" recipe given in Part I, if properly fried, makes a doughnut which is very good the day it is made, but which becomes rather compact and bread-like upon standing.

2. Yeast-raised doughnuts, made by the "standard" recipe but with the substitution of one cake of compressed yeast for the baking powder, show a very low absorption of fat. They are quite different from the ordinary baking-powder doughnuts, but are often well liked.

3. The following recipe has been repeatedly tested in the Experimental Kitchen and found very satisfactory. The doughnuts had a crisp tender crust and a light fluffy crumb. When they were fried submerged in the fat, absorption was found to be low. The keeping qualities

of this doughnut are exceptionally good, as it does not become hard and compact upon standing over night. As will be observed, it is a richer mixture than the "standard potato" doughnut.

A good recipe for potato doughnuts

Ingredients	*By measure*	*By weight*
Sugar	1½ cups	300 grams
Butter	2 tablespoons	24 "
Eggs	2 eggs	96 "
Hot riced potatoes	1 cup	224 "
Milk	⅔ cup	163 "
Flour	5.3 cups	600 "
Baking powder	4 tablespoons	40 "
Salt	1 teaspoon	5 "
Cinnamon	1 teaspoon	2 "
Nutmeg	½ teaspoon	1½ "

Doughnuts of this mixture, rolled ¼ inch thick and cut with 1¼ inch center hole, then fried for one and one-half minutes submerged in fat at 185°C., absorbed only from 15 to 17 per cent fat; while if allowed to float for three minutes, the mixture absorbs as high as 30 per cent of fat, in some tests.

4. A temperature of 185°C. was found to be very satisfactory for frying doughnuts. Doughnuts of average standard size and weight (about 32 grams of dough), having a center hole 1¼ inches in diameter, require about 3 minutes to fry at this temperature if allowed to float, and about one and one-half minutes if submerged in the hot fat during frying.

5. For the best quality of doughnuts the dough should be of fine texture but rather soft and smooth, and handled as little as possible.

6. The time of frying has as much influence as any one factor in controlling fat absorption. Frying at too low a temperature and thus requiring a longer period of cooking, frying doughnuts that are too thick and require a long time to thoroughly cook through, or leaving the doughnut in the fat too long, due to poor judgment on the part of the cook as to when the product is done, all tend to produce a doughnut unnecessarily high in fat. For the woman who fries doughnuts often, some simple device, such as a frying basket of appropriate size, by means of which she can keep her doughnuts completely submerged during frying, may prove to be a worth while investment; for by such a device she can reduce the time of frying practically one-half and the fat absorption considerably, and produce a doughnut of superior quality and appearance. However, this process cannot be recommended for large or thick doughnuts or for those which tend to "swell shut" in cooking.

HOUSEKEEPING UNDER CHARLES II

In the library at the headquarters of the Society of Friends at Bishopsgate, there is now preserved an interesting manuscript, rescued from the hands of a grocer before he had been able to use more than a few pages of it for waste paper. This is the household account book of Sarah Fell, one of the step-daughters of the famous Quaker, George Fox. The book covers the period from 1673 to 1678, and a reprint has been published by the Cambridge University Press.

Shopping was done at Ulverston and Dalton on weekly market days, but much had to be brought from Lancaster, twenty miles away across treacherous river estuaries, and horsed messengers were constantly being sent to Kendal and Kirby Lonsdale. Brown sugar, oranges, and gloves were received from London. Purchases of beeswax for candlewick indicate how the house was lighted. It was largely heated by local peat. Cost of carriage made coal prohibitive; as much as £1 2s. 5d. was paid for 3 qrs., and again £1 8s. for 4 qrs.—money having four or five times its depreciated value of today. The Quaker household had wine, ale, and brandy, and medicinal aids included cinnamon waters, juniper berries, saffron, and "treakle" blooding leeches. There is an entry concerning tobacco pipes for Sister Susannah.

Sarah Fell and her sisters did not restrict themselves to sober grey; green, black, and white ribbons were purchased to lighten the Quaker dress; stockings were dyed sea-green and sky colour, and a petticoat, dove colour; Sarah had her muffs, Sister Rachael her whisk, or neckerchief, and Susannah was gratified by a little pocket looking-glass.

It is impossible to deduce, from wages paid alone, the real position of domestic and farm helps. Anne Standis's wage for a year was £1 17s. 6d., but she restored 8s. for a silver spoon lost, and 6d. for a pot broken. What modern lady help, one wonders, would give up nearly three months' wage for a lost spoon?—but times have changed. In the hayfield women received only a penny a day each; boys harrowing for thirty days had only a halfpenny each day. The marketing of the dairy produce of Swarthmoor appears to have been entrusted wholly to a woman servant, Elin Pollard, whose wage was £2 a year. Wage rates were fixed by the justices at Quarter Sessions, and it was a terrible offence to ask for more, though, as servants then mostly lived in or enjoyed estate cottages, there were many small ameliorations of their lot. Meat and drink were given to all day workers, evidently to greater value than the penny or two they received in coins.—*The Table.*

FOR THE HOMEMAKER

THE RESPONSIBILITY OF THE CONSUMER FOR FOOD STANDARDS AND PRICES

AGNES FAY MORGAN

(*Concluded*)[1]

Bleaching of flour. Another case, equally striking, is the famous bleached flour controversy. Of late years a demand for a very white wheat flour has come from the consumer. The millers responded with a refined flour bleached to an unnatural degree of whiteness by means of a poisonous gas, nitrogen peroxide. Certain minute quantities of the resulting nitrites were shown to be retained in the finished product, to the supposed detriment of the health of the consumer. The nitrite process of bleaching was then forbidden by various state laws. A Minnesota mill carried the matter to the Supreme Court of the United States in 1914, and there obtained a decision that the mere presence of nitrites was not sufficient for condemnation of a shipment of flour, but that the presence of the poisonous substance *in sufficient amounts* to prove deleterious to the health of those eating it must be proved. This decision plainly puts the burden of proof upon the food official, demands demonstrations by expensive experiment, and on the whole reverses a good deal of the progress that had been made in the matter of preservative regulation. This same decision may be applied no doubt to the dried fruit matter, to the use of saccharin and dyes, and to many other mooted questions. The point to be made here, however, is that a cheap grade of flour artificially bleached to the appearance of a high grade article might under the law be foisted on the public at the discretion of the manufacturer. If such fraud is detected it may be punished, of course, but detection is difficult. The consumer asks for this white flour and gets it. All this is in spite of the fact that those grades of flour which retain more of the exterior coverings of the wheat grain and so have a darker color are usually thought to be of considerably more value in a nutritive sense than the superrefined flours, since greater quantities of ash and vitamines are retained in the former.

[1] The first installment of this article appeared in May.

War bread. Our twelve months' experience with war bread seems to have pointed the lesson of the value of flours less highly milled than those formerly thought palatable. Certainly the questions of bran or no bran, 56 per cent or 80 per cent milling of the wheat berry, were thoroughly thrashed out, authorities being aligned in awesome array on both sides. The United States Food Administration adopted a conservative position, eventually ruling that the flour sold should contain 74 per cent of the wheat. This meant a more uniform and slightly higher extraction than had been the American standard, but produced a fairly white flour which, in combination with flour from other grains, especially rice and barley, made an acceptable war bread.

Artificial coloring matter. The question of the use of coloring matter in foods is only nominally concerned with the public health. Certain aniline dyes are allowed by the federal law, as well as the law of California, to be used in foodstuffs, provided their purity is certified to, and their presence is confessed on the label. Natural or vegetable colors are allowed also, but greening by copper of canned vegetables and pickles has been forbidden. An actually poisonous substance is of course involved here. Ketchup, maraschino cherries, oleomargarine, butter, cheese, noodles, macaroni and other alimentary pastes, are the foods most frequently colored. A recent decision forbids the coloring of macaroni, noodles, and other alimentary pastes because of the alleged fraud involved. Highly colored butter, oleomargarine, and cheese are demanded by the consumer, and so in spite of the tax on colored margarine, for instance, artificial addition of color to these foods is practiced and allowed.

Artificial flavors. Saccharin. Synthetic or artificial flavors are used chiefly in extracts and softs drinks and may be said to have little hygienic significance except for the destruction of natural flavor in foods, and the miseducation of the taste of the consumer. The use of saccharin, a coal tar product of no food value, but 550 times sweeter than cane sugar, has been a mooted question. The federal law and most state laws forbid its use as a fraud, and as deleterious to the public health. It may be used, however, for medicinal purposes. A few years ago the Supreme Court of Missouri ruled that it might be used, a decision based probably on the bleached flour ruling. The substitution of saccharin for sugar is probably to be considered dangerous chiefly because of the false food value so enforced, since the sweet taste of sugar without the food value of the sugar may cheat the consumer into a feeling of satiety without any real alimentation.

The constant use of saccharin by large numbers of people in Europe during the war, however, seems to have shown that even in fairly large amounts the drug has no detectable deleterious effect. Fortunately its unpleasant aftertaste acts as a safety stop on its excessive use, so that maximum doses have probably seldom been taken.

Cost of pure food laws. In molding public opinion on this matter of the use of colors and preservatives, we must remember the economic as well as the hygienic side. Waste of food that is edible should be avoided, and the crusaders' spirit of reform at any cost must be restrained in the interest of those below the line of choice in the matter of food. Dr. Wiley's campaign against every kind of sophistication was a splendid achievement, for which we should be duly appreciative, but his white heat of fervor in the quest of the holy grail of the absolutely pure food product has cost the consumer something. Sane conservation of all safe edible food should be the slogan of the modern food official.

The examination of food handlers for communicable diseases. The third hygienic aspect of the food laws, that concerned with the prevention of the spread of disease, is one which has unfortunately been much neglected until recently. Many states and most municipalities have regulations as to the employment of persons suffering from communicable diseases in factories, stores, or restaurants handling foods. Such regulations have been practically a dead letter, chiefly because of the lack of funds to enforce them. The public has been apathetic on this point, a matter presumably of more vital importance than the comparatively insignificant question of preservatives. The spread of syphilis, tuberculosis, and typhoid fever is peculiarly concerned, since persons suffering with these diseases may be up and about, engaged in their daily tasks, for a considerable length of time. The matter of typhoid carriers is a serious menace. A case at Hanford, California, was reported some years ago, in which ninety-seven persons had contracted typhoid fever from eating food prepared by a woman who was a typhoid carrier, though she had never exhibited the symptoms of the disease herself, but had merely nursed her daughter through an attack thirty-five years before.

The state sanitary code of California has a section stating that persons suffering from communicable diseases shall not be employed where foods are handled. Small provision is made for its enforcement, and it is safe to assume that as a state measure, particularly in rural communities, it is a dead letter. Municipal conditions are better, but public opinion

in this matter is deplorably lax. The ethics of the medical profession add to the difficulties, since reporting infectious disease has not yet been incorporated completely into that code. In the matter of syphilis and venereal diseases in general the physician's inherited instinct to protect his patient may work aginst the public good. Until public opinion demands legislation, and more particularly appropriations for enforcement of regulations requiring health certificates for all his employees from every food manufacturer and retailer, this unfortunate condition will continue. The instinct for decency as well as the need for protection against possible infection is concerned in this as in all questions pertaining to cleanliness in foods.

The fourth hygienic aspect is one only contemplated so far by the laws. According to Dr. Alsberg, chief of the Bureau of Chemistry of the United States Department of Agriculture, and successor to Dr. Wiley, the food laws provide the following protection to the consumer:

(1) Nothing injurious, poisonous, or deleterious to health must be added to food.

(2) There must be no imposition, false pretense, or fraud perpetrated on the consumer.

(3) No sound wholesome food or food ingredients must be kept from the consumer.

"Devitalized foods" and deficiency diseases. This last point covers the matter of the devitalization, denaturation, or "robbing" of foods. A case specifically covered by the federal law is that of "polished rice." Recent investigations have shown that certain classes of people in Asia and the Philippines entirely dependent on rice for food exhibit many cases of a peculiar disease called beri-beri. This disease, similar in character to neuritis, has been shown to be the result of deficient nutrition, following the use of polished rice as an almost exclusive food. Polished rice is rice from which the outer red husks or pericarp have been removed, and the inner grain coated or not, as the case may be, with talcum and glucose. When unpolished rice, fresh meat, fresh milk, or fresh vegetables were fed to these patients the disease disappeared. The substance usually called vitamine, removed in the rice polishing, is present in exceedingly small amounts, but seems to be indispensable for the maintenance of health. The matter of stringent legislation as to the sale of such polished rice in this country cannot be considered a vital issue, for probably very few persons in the United States subsist on rice alone. The number that might be subject to the deficiency diseases resulting from lack of the rice vitamines is therefore very small. Over seventy of

the crew of one of the German cruisers interned at Norfolk, Virginia, in 1915, exhibited the disease of beri-beri, probably because of their subsistence for such a long time on canned and on salt foods during their dodge around the world after war was declared.

Pellagra. Another disease, now found frequently in the south of this country and said to be spreading to the north, is pellagra. Recent investigations by the United States Department of Public Health have shown that this, too, is probably a disease of diet deficiency, the result of the continued use of musty cereals, salt pork, syrups, and cheap canned foods.

Regulation of canning, milling, and like processes of food preparation seems to be indicated as an additional factor of safety for the public health, especially for the promotion of proper growth of children. Such regulation is already under consideration by food officials but the whole matter is in the melting pot, the findings being as yet contradictory and incomplete. Boiled milk comes under the searchlight in this same respect, since scurvy and rickets in children are known to be disturbances in nutrition, even though they have not been shown conclusively to be diseases resulting from deficiency in diet.

War scurvy. Many cases of scurvy among both the military and civilian populations of Europe were reported during the war, and ascribed to the unsatisfactory character of the food supply. These cases are recorded as having occurred among French, Italian, German, and Russian troops, British troops in Macedonia, orphaned children in Vienna and Prague, and middle-aged civilians in Glasgow. The total number of sufferers is probably much greater than the sum of those which happen to have been published in the medical journals.

The prevalence of scurvy in the British navy, as well as in the British army in the East, was such that the research staff of the Lister Institute in London has devoted a large part of its energy for several years to investigations into the cause and prevention of the disease. These investigators, most of them women, have shown that scurvy is probably a true deficiency disease, caused by the absence from the diet of a definite vitamine, which has been called "water-soluble C." This substance is present in varying amounts in fresh fruits and vegetables, germs of grains and of other foods, and may be impaired or destroyed by cooking or canning. Californians are interested in the fact that citrus fruits, particularly lemons and oranges, are especially rich in water-soluble C, even though prunes and plums are probably largely lacking in this respect. Fresh milk and lean meat apparently are not well supplied with this sub-

stance, and must therefore be supplemented by vegetables and fruits in order to provide a safe diet. Generalizations on this subject are not yet entirely justified, however, for new data are constantly being brought forward.

"*Fat-soluble vitamine.*" A word should be added concerning the existence and the function of a third vitamine known as the fat-soluble vitamine, since it is usually found in the fat fraction of foods. This substance apparently is indispensable for the growth of the young, and its absence from the diet has of late been associated with the appearance of rickets. It is plain that fats of vegetable origin contain little or none of this accessory substance, but that milk fat, cod liver oil, egg yolk fat, are rich in it. Some quantity is found also in beef suet and in mutton fat (although not in lard) and in green leafy vegetables. The provision of the comparatively expensive foods which carry this substance is a serious problem at present in Europe. Even in England the prevalence of rickets and other forms of malnutrition among the children of the poor must be contemplated with alarm.

Certain butter substitutes such as the nut butters are entirely lacking in the fat-soluble vitamine. while others made partly of milk fat and beef oleo oil contain a fair proportion of it. The choice for the diet of children is obviously in favor of the latter. Yet the manufacturers of nut butter are able actually to increase the sale of their product by proudly proclaiming it to be "free from animal fats."

The economic aspects of the food laws. In addition to the need for protection of the public health there has developed the very real problem of protection against economic fraud in foods and drugs. Such frauds may involve deception either in quantity or in quality of articles offered for sale. For the prevention of gross fraud in the former matter there are of course duly appointed county or city sealers of weights and measures, who inspect the weighing and measuring of foods and other commodities sold in bulk.

The information on the label. Until recent years there was no protection against variations in goods sold under the manufacturer's seal in proprietary packages. Since 1916, however, following the enforcement of the famous Food Inspection Decision 154, all containers, of any kind, of foods sold either at wholesale or retail, must declare in conspicuous lettering the net weight, measure, or count, of the contents in terms of the largest unit of such weight or measure contained therein. In addition proprietary food labels must carry the name of manufacturer and

place of manufacture, and, if mixtures or compounds, a statement to that effect. As a result of the older legislation artificial coloring, flavoring, per cent of potent drugs, amount of allowed preservative, must also be plainly printed on the label.

There can be no doubt that enforcement of these reasonable rules about the labelling of food packages has had an incalculable value in raising the standard of foodstuffs offered in the market. It has likewise aided in raising the cost of such foodstuffs, largely by eliminating much of the doubtful but stimulating competition of former times. The mushroom type of manufacture is displaced, as a result of these requirements, by the highly organized, efficient, and profitable modern plants. More uniform and constantly better products are offered to the public at a constantly rising price.

Read the label. A rather discouraging feature of label regulation is the consistency with which the consumer who has demanded protection and is apparently eager to pay for it refuses to take advantage of it by reading the label. A clever baking powder "expert" stated not long ago that she had asked dozens of audiences of club women what the ingredients of their favorite baking powders were, and found usually only one or two women out of a hundred who even knew that these ingredients were declared on the label of the can. The full value of the higher price paid for better foods cannot be realized, of course, until the new generation of intelligent purchasers discriminates between that which is allowable legally and that which is the best and the most that can be produced for the price. The necessary information is on the label.

Misleading advertising. In spite of the very commendable progress that has been made by the advertising trade or profession toward truthfulness and dependableness in published statements, there remains considerable room for improvement. The strict control of claims on the label of package goods has resulted in the wide use, by certain interests, of booklets, billboards, demonstrators, and other means of advertising separate from the label. In some cases amusing differences between claims on the label and in the accompanying leaflet were noted. Baking powders, because of keen competition for a business with high profits, and breakfast foods are among the more easily recalled instances.

A most potent influence in the development of high prices for food has been the campaign of certain advertisers for the education of the consumer to the belief in the exceptional nutritive, sanitary, and gustatory merit of certain high priced products. Examples of slogans used in

these campaigns will occur to the reader at once. "Heart of corn," "food shot from guns," "sliced bacon," "beans with a college education," are a few of the illogical but apparently effective descriptions used. All these products are sold in packages, are dependable, acceptable, often guaranteed goods, but cost from 50 to 500 per cent more than their humbler equally nutritious competitors sold in bulk.

No thoughtful person would advocate the return to the unstandardized and unreliable *caveat emptor* condition which prevailed before the day of the food official and the national advertiser, but it should be clearly recognized that, in some degree as a result of such advertising, the high cost of living may be written cost of high living. With a large proportion of the population thus constantly admonished to buy only the certified package, and acting on that advice regardless of cost, little progress toward downward trend of prices of food can be expected. The writer offers no solution other than popular education for the problem which is thus presented, for no other is possible. It is desired simply to bring this angle of vision upon rising food prices to the attention of the reader.

The possibility of putting on the market clean reliable foods in bulk has been demonstrated, but the profit in such business is apt to be too widely and evenly distributed among producers and dealers to offer as great allurement to business as does package monopoly. We see of late even oranges, apples, and nuts put up in trade-marked wrappers and nationally advertised by the producers' associations. The foods thus marketed are no better than similar fruits and nuts commanding the same or a lower price without a trade-mark, but they present the advantage to the consumer of insured uniformity. For the producer they form the basis of a specialized and carefully fostered demand upon which may be constructed a higher level of retail prices.

The disadvantage of such education of taste to those economically below the level of choice is evident. Since the demand for dependable lower priced foods is decreased in favor of *de luxe* articles, less competition and production in the former lines ensue, and their price is gradually levelled up to that of the advertised product.

A wider dissemination of knowledge of the nutritive value of foods might well be undertaken to combat the miseducation in such matters which the food advertisers have more or less consciously brought about. If it became generally understood that only a more pleasing flavor can be bought with the higher price of prepared cereals, olive oil, trade-

marked fruit, and similar products, and that even this is sometimes only the psychological reaction of taste to the repeated statement of the advertiser, a more rational balance between supply and demand might result. Nature produces both perfect foods and culls in some degree, in spite of the most enlightened agriculture, but the modern American consumer refuses to make use of either perfect product or cull until an astute manufacturer has given them a fancy name and a package habitation.

Ready cooked foods. Another aspect of the increasing use of package goods is the tendency of the housewife as well as the institution steward to purchase more and more food in ready-to-serve form. Steam cooked cereals, canned vegetables and fruits, canned soups, can be obtained only in trade-marked packages. Hominy, cabbage, sauerkraut, and apple sauce are among the recent additions to the canned goods which continue the upward trend of price for the humblest foods. The can, the labor of canning, and the canner's profit are included in the higher price, but the consumer has less work to do in preparing the food for the table. Aside from all question as to effect upon nutrition of the increasing use of autoclaved foods, the effect of this demand upon food prices should be noted. The tendency toward preparation of food for the table in large quantity by manufacturing concerns rather than in the individual kitchen may be considered established, and on the whole is to be commended and encouraged. But this demand adds its bit to the rising cost of foods.

False advertising. The most vicious examples of false advertising are to be found not among claims made for foods but in support of patent medicines. This unprincipled exploitation of ignorance and misery which was rampant in America twenty years ago is now somewhat curbed by the vigorous action of the council of chemistry and pharmacy of the American Medical Association. The laboratory maintained by this association for the purpose of analyzing the compounds and exposing the fraudulent claims of makers of medicine has functioned chiefly by education of the medical profession. Label legislation has aided in this matter, but we have still a vast flood of dishonest and tragically amusing advertising of patent medicine. The better class of newspapers and magazines refuse to print the worst of it, but somehow much of it still gets before the eye of the gullible public.

Protection against this kind of imposition is costly, and not yet available. As in the case of foods the legitimate products left on the market must bear the cost of the whole proceeding. Fortunately, however, in this case no irreducible minimum must be consumed.

The "water-glass test." It is interesting to note the vigorous manner in which unfair advertising methods are combated by the manufacturer or dealers whose business may be hurt by such methods. The long fought egg albumen case among the baking powders comes to mind in this connection. Certain baking powder concerns introduced a minute amount of dried egg white into their powder, then used the prolonged foaming with water, the "water-glass" test, which is thus secured, in their claim to superior leavening power. The claim was of course spurious, but could be supported by visual demonstration to the conviction of the housewife. Competitors of these firms immediately launched widespread and tremendously costly advertising and litigation against the device, with virtuous indignation over the trick as the main motif. Similar tricks are today constantly before the eyes of the public with no impartial tribunal to prevent them or even to point them out.

Contrary to our experience in practically all other movements toward legal control of food and drug sales, we might find that a vigorous enforcement of a sane advertising censorship might help to reduce instead of increase food prices. The opposition of the press to such a move has so far made its accomplishment impossible. The slow process of education of all the people, considerably aided by the teaching of domestic science in the schools, might be supplemented advantageously by careful control of the daily printed directors of thought. The consumer's demand for protection must be irresistible before the involved and scattered interests and ethics of the advertising business can be controlled.

The consumer, through his government representatives and his own purchasing choice, has in the last fifteen years demanded better foods, conforming to uniform standards, put up in pleasing packages, as far as possible ready to eat, and of the brand most widely advertised at the moment. He has insisted that the weight be declared on the label, that the smallest amount possible of preservatives or artificial flavorings and colorings be used, that "substitutes" be avoided, and that only the superproduct of the farm be brought to his door. He has cared a little as to the bacterial history of employees in food concerns, and has taken heed of the claims of the pseudo "food expert" with an axe to grind. In consequence of these demands a cleaner, more appetizing, if no more nutritious food supply is in our markets, and its price is rapidly passing beyond our means.

EDITORIAL

"Successful Family Life on a Moderate Income,"[1] written by so scientific a student of social economics as Mrs. Mary Hinman Abel, is an excellent contribution to our home economics literature.

We have needed such a book for a long time. We need more and more of them for the homemakers, both men and women, who are diligently seeking definite aid in their homemaking problems. This is not a book of mere directions. It is that much greater thing, an inspiring, helpful discussion of the meaning of family life and the basis upon which it rests as a successful enterprise.

The opening paragraph states the problem in the questions propounded, which are discussed to helpful determination and suggestions later on. "What is success and how are the great number of families, living on the average income in this country, to win it? How are they to obtain development and happiness? Are any principles to be laid down, and examples cited? Are 'disruptive tendencies' as great as has been claimed?"

Mrs. Abel has written far more than a text book although the form of analysis of each chapter by questions admirably fits it for this. She has presented an exposition of the ultimate purpose of homemaking while giving practical aid to the solution of its economic problems. The right kind of citizens can come only from the right kind of homes, and no business is rightly conducted until it is economically sound. There must be a full comprehension of this truth by all the teachers of home economics. They must first see the purpose and meaning of family life before they can properly present the means for its accomplishment. In no other book which has come to my knowledge have these things been so well presented or so adequately discussed.

It was a fortunate day for the home economics movement when it took up the spending of the family money as a serious study. It vitalizes all the processes of daily life and is found to have deep root in ethics as well as economics. Men acquire knowledge, skill, power over material things and yet go to pieces because of lack of purpose. The eye must be fixed on the goal. To know what you want is to know very soon what you cannot have, and with a clear aim in view, miracles are wrought out of unpromising

[1] See also book note, page 332.

beginnings; new ideas of thrift are adopted, there is new stimulus to earn in outside ways, the judgment as to value grows apace. The difference soon appears between mere wishing for a good and that passionate desire for it which moves to sacrifice for its sake. The best system of ethics is mere theory until it comes to living it out, for it may be truly said that sacrifice is the measure of devotion; we really desire a thing only so far as we are willing to give up other things for it. (Chapter 16, page 90.)

The chapters devoted to the family budget naturally attract one whose belief is that home economics teaching, whether in class room, on lecture platform, or in magazine articles, should to a degree center about this basic plan. They are concise, helpful, and admirable.

Between now and the next census-taking, women must accomplish at least one definite task. This is the establishment of the business of home-making, or the woman's part in it, as a gainful occupation. Until this is done the economics of family life proceed from a wrong premise.

Women who are not receiving wages from sources outside the home are all classed as unoccupied although among them are found the housewives who are true producers of wealth in the newer sense; that is, they create utilities that satisfy human needs. Out of raw materials they produce the finished product, not only in food and clothing but in immaterial forms that make up the very character and atmosphere of home. They are the makers of the intimate things of life. (Chapter 6, page 43.)

No other portions of Mrs. Abel's book are better presented than those which deal with "The Housewife's Contribution as Buyer and Manager," and "The Mother's Contribution to her Children."

Two generations ago when there was so little ready made, all departments of practical life had to be conquered in the home. By and through the industries carried on for the support of the family, as in the farm home, a school of life was in progress, and the precious inheritance of standards and customs, the very foundations of national character, was being formed and handed on. The working mother of our moderate income family today is doing actual housework and she must continue to do it until conditions radically change, for it is at present, as we have seen, the most feasible way of making her neccessary contribution to the income; and it is this fact which gives her a substantial advantage in child training which she must learn to use. (Chapter 10, page 111.)

We have long wanted this book, and all exponents of true home economics theory and practice will rejoice that Mrs. Richards' warm friend and true follower has been the one to give it to us.

HELEN LOUISE JOHNSON.

OPEN FORUM

An Answer to "The Extensionized Farm Woman." Having read the article by Mrs. Gilbert on the "Extensionized Farm Woman" I desire to commend it for the accuracy of knowledge displayed concerning farm home conditions and the sincere desire manifested in it toward everything that will improve such conditions and at the same time lighten the burdens of the housewife. It carries with it many strong arguments for the home extension service and was undoubtedly intended to be constructive and helpful in this direction.

Feeling that the few critical notes sounded in her article are based upon misunderstanding or misapprehension of the real attitude of the home extension workers, as I know it from observations in the field as well as from personal acquaintance with both state and national leaders, and from conferences with them relating to the whole home extension program, I venture to point out where, in my opinion, Mrs. Gilbert incorrectly interprets the aims and purposes of this fine new aid to home building.

In the first place, the statement that the city home viewpoint is the basis of judgment of rural homes is not in accord with the attitude of home extension workers as I have seen it. The whole program is set up and the whole force is organized with the rural home viewpoint in mind and a large percentage of the force have come from country homes. This is the fundamental idea in building up the extension service. It is comparatively new and some workers may have gone out who do not correctly interpret country life, but they are the exception rather than the rule and should not be made the basis of any expressed or implied criticism of the whole force.

My impression of home extension agents is that their work fits most admirably into Mrs. Gilbert's idea of the home as a "business institution." The earlier idea of the home extension worker as a teacher of frills, furbelows, fancy dishes, and fol-de-rols is put to shame by the intensely practical and helpful program of the present working force. Short cuts in housework, time and labor-saving devices, food values, health hints, kitchen surveys, care of sick are illustrative of the work they now do. Surely this all points to "business." Assuredly this conforms to the modern ideas of efficiency. In this same connection one of the finest pieces of work done is the carrying of original ideas and plans from one resourceful housewife to another. I do not think, in

view of the actual work done by a large percentage of extension workers, that Mrs. Gilbert's implication that they emphasize non-essentials is entirely fair.

In passing it might be timely to say that the great "business" of the home is not the accumulation of dollars or property as an end. Woman's great business is not primarily to increase income but rather is to maintain a comfortable and happy home in which children are trained to become useful citizens.

Canning all surplus food was a war time measure urged in the interest of conservation. Quantity was the war time slogan. The methods developed are as timely today as in war times and mistakes in quantity should not be laid up against extension agents. A variety of fresh meats is liable to be lacking on the farmer's table in the summer and a variety of vegetables also lacking in the winter unless canned in the proper season. Preparing these for the table in quantities involves a saving of time and fuel, and enables one to meet sudden emergencies in the preparation of meals.

In urging that women buy more clothing ready made Mrs. Gilbert is flying in the face of the testimony of experts that no family of less than $1500 annual income can afford to hire sewing done. The farm labor income is far below the figure as an average. It is apparent therefore that the home sewing will continue for many years in the larger number of American homes and every aid to better selection of colors and materials and every device which will enable homemakers to become more skillful and expeditious in such tasks is practical in the truest sense.

One of our leading statesmen has recently said that the small farm home under ideal conditions is the safest and best unit of our civilization. We join heartily with Mrs. Gilbert in urging comforts and conveniences in farm homes, and income from the business of farming which will make such comforts possible. We believe that the home demonstration agents are a great force in searching out and keeping continuously before our people the things that are vital in working out such a program and we believe every farm woman should support the new movement heartily by words of commendation, constructive criticism, and suggestions for improvement.

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BOOKS AND LITERATURE

American Red Cross Course in Food Selection. Headquarters, American Red Cross. Washington, D. C. 1921, pp. 100. Fifty cents.

The lessons are prepared primarily for Red Cross classes in food selection, but can be used by all women who are interested in the problem of feeding the family. The course embraces a study of foods and the factors that must be considered in selecting an adequate diet. It aims to give a knowledge of foods and food groups which will enable the housekeeper to modify her selection of food to suit the needs of the individual members of the family. The lessons include quite full discussions of food and its use in the body, and the more important food materials, such as milk, vegetables, fruits, and cereals. One lesson gives a convenient method for the calculation of the dietary; another discusses feeding in special cases, including feeding in illness. The subjects of infant feeding and food for the child from two to sixteen years of age receive considerable attention.

As the lessons are intended for use in Red Cross classes, it is expected that the instructor will contribute much to their value. At the same time the person working alone will be able to comprehend most of the subject matter, and to review each lesson in the light of the topics suggested for class discussion.

The home work assigned in connection with each lesson will be helpful to any housekeeper who is of an investigative turn of mind. Detailed suggestions for demonstrations, and valuable food tables are contained in an appendix. Supplementary to the lists of bulletins given in connection with the lessons, there is a brief annotated bibliography of books of reference.

In the foreword acknowledgment and thanks are gratefully extended to the Office of Home Economics, U. S. Department of Agriculture, for its generous and untiring coöperation in the preparation of this pamphlet; to Mabel T. Wellman, Head of Department of Home Economics, Indiana University, to Mrs. Alice P. Norton, Editor of JOURNAL OF HOME ECONOMICS, to Dr. Dorothy Reed Mendenhall, Children's Bureau, authors of the lessons of which these are an elaboration; to Dr. Ruth Wheeler, Head of the Department of Home Economics, Goucher College, for helpful suggestions and criticisms.

The Community Health Problem. By ATHEL C. BURNHAM, M.D. New York: The Macmillan Co., 1920, pp. 149.

Beginners in public health work will be grateful to Dr. Burnham for this brief outline of the public health problem. The author uses the term "community" to include the entire nation and does not confine it to a particular neighborhood limited in area and composed of a fairly homogeneous population. "Community health schemes" as we now understand them, such as the Cincinnati Social Unit experiment and the Framingham demonstration, are indeed briefly discussed, but more general types of health service, such as public health nursing, the organization of federal, state, and municipal health departments, industrial medicine, school medical inspection, and, finally, health insurance and socialized medicine, receive most attention.

To attempt to cover so wide a field in so small a volume has naturally resulted in serious omissions. The discussion of parental and child welfare work, which because of its preventive nature now stands in the forefront of public health work, is particularly scant. The only reference to

defective nutrition is a brief discussion of the Dunfermline scale of grading nutrition and the number of children found in each grade in New York City. The rapid development of nutrition classes and the work of visiting dietitians in correcting bad food and health habits which impair nutrition are entirely neglected. Such an oversight is hardly excusable in the light of the important bearing which the treatment and prevention of defective nutrition have upon the incidence of other illnesses, particularly tuberculosis. The chapters on workmen's compensation, compulsory health insurance, industrial medicine and state medicine, while necessarily brief, are well handled. A bibliography is appended, but here the fault is the same as in the text, a far too slight consideration for child welfare problems.

JOHN C. GEBHART,
The A. I. C. P., New York City.

Successful Family Life on a Moderate Income. By MARY HINMAN ABEL. Philadelphia: J. B. Lippincott Company, 1921, pp. 256. $2.00.

This book is one of the series of Home Manuals edited by Benjamin R. Andrews. Some of the chapter headings will give an idea of the content: "The Higher Values of Family Life," "The Financial Partnership," "The Housewife's Contribution as Buyer and Manager," "The Family Budget, its Purpose, Use and Aims," "The Look Ahead."

A further discussion of the book will be found in the editorial section of this number.

The Nervous Housewife. By ABRAHAM MYERSON, M.D. Boston: Little, Brown and Company, 1920, pp. 273. Price $2.25.

This book offers a stirring challenge to the student or teacher of home economics. Its title gives no adequate clue to its significance. From the first page to the last the modern home and the relation of women to it is as much the theme as the nervousness of the housewife. The connection is clearly brought out. The book therefore has interest and value for a much greater variety of persons than the nervous housewife herself, or her medical adviser. Every husband will find words of wisdom and helpfulness in it. Every student of home economics who goes beyond the arts of cooking and sewing, and studies the problems of the home will be aroused to new efforts to ferret out and cast aside the "inefficiency and waste inseparable from individual housekeeping," and find means of substituting for the "bad effects from the segregation and privacy of the home" a more truly social spirit. Dr. Myerson makes a vital point when he states that behind the divorce evil is a huge body of quarreling and divided homes. Uniform divorce laws are not so much what society needs as a reorganization of the home, including the relations of the husband and wife to each other and their arrangements for their children. Leaders in the home economics movement must agree with the author in the belief that the home must be reorganized on the basis that the man and woman are equal partners in the relationship. How this reorganization is to be effected is the problem—a worthy one for every woman and indeed every man to study.

MARION TALBOT,
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Food and Life. By MARION LANSING AND LUTHER GULICK, M.D. Boston: Ginn and Company, 1920, pp. 182. $0.68.

This little book has the avowed purpose of interesting children in the food business and leading them to assume intelligent responsibility for their own food habits. It is not a textbook but it will prove very useful for the teacher of home economics, of physiology, and of geography.

The book is written in a charming style and includes many short stories, analogies and allusions to mythology and history which can be used to good advantage in that extra five or ten minutes of a lesson which it is so important to utilize. The chapters on the fuel value of foods are especially suggestive and the subject of the storage of the

energy of the sun in plant and animal cells and its subsequent release at need is put in a way that will be illuminating to many older readers.

There is the usual material on the choice of foods, with pictures and tables of the food groups. This is followed with paragraphs on definite food habits put in a form which will not tend to make children self-conscious.

There are many echoes of war literature in such phrases as "world table," "ration," "kitchen service," and there are chapters devoted to the school garden army and to canning and drying clubs. An especially good feature is the chapter on economy of food with its lessons in balancing money value against food values.

Each chapter is followed by questions, and throughout the book there is a constant appeal to action with a stimulus to do as well as to know.

FRANCES SWAIN.

Insects and Human Welfare. By CHARLES THOMAS BRUES. Harvard University Press, 1920, pp. 104, illus. 42. $2.50.

This slender red volume is a very readable collection of five chapters designed to introduce the general public to the principles and practices of economic entomology, especially in their biological relationships, being, as the cover page advertises, "an account of the more important relations of insects to the health of man, to agriculture, and to forestry."

Part of the material appeared originally in the *Scientific Monthly;* in its present form there are four main chapters entitled Insects and the Public Health (24 p.), Insects and the Food Supply (24 p.), Forest Insects (24 p.), and Household Insects (14 p.). The last chapter is a brief four page summary of The Outlook for the Future.

The major part of the book is therefore directly valuable to all interested in home economics. Though popularly written, the reader is surprised on completing the book, to find what a wide range of useful as well as interesting information he has acquired. It is unfortunate that the present paper situation has made it necessary to demand $2.50 for this volume, as it will doubtless very materially limit the distribution of this valuable book among the very people who need it most, and so reduce decidedly its usefulness. The lack of an index is also unfortunate, especially in a book containing so much that will be new to its readers.

The wide scope of these hundred pages has been made possible by consistently placing the emphasis upon the insects themselves, rather than upon the more technical details of their relationships to man, such as the species of microörganisms they transfer, either accidentally or mechanically or as hosts.

The book closes with a brief and encouraging outlook for the future, summing up briefly the various methods of controlling insect destruction, the reasons why insect spread is less limited than formerly by geographical and climatic barriers, and the emphasis now properly placed on the biological methods of control.

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NEWS FROM THE FIELD

American Food Research Institute. Announcement has been made by the Carnegie Corporation of New York of an agreement with Leland Stanford University for the establishment of a food research institute to undertake an intensive study of problems connected with the production, distribution, and consumption of food, utilizing the university laboratories so far as necessary. A grant of $700,000 has been made by the corporation for the support of the institute during the next ten years, and it is hoped to begin operations July 1. Coöperation with existing food research agencies is contemplated, and duplication of equipment is to be avoided so far as possible.

Press reports attribute the inception of the idea to Hon. Herbert Hoover, Secretary of Commerce, who will serve as a member of the advisory committee.

The active management of the institute is to be vested in a staff of three directors, representing agricultural, human nutrition, and economic phases of nutrition. Dr. C. L. Alsberg, Chief of the Bureau of Chemistry, U. S. Department of Agriculture, has accepted the directorship for agriculture, beginning about June 1; Dr. Alonzo Taylor, for human nutrition; Joseph S. Davies of Harvard, for economics of nutrition.

Science Service, a new organization, has been substantially endowed and is chartered as a non-profit-making corporation. Its control is vested in a board of trustees composed of ten scientists and five journalists. The National Academy of Sciences, The American Association for the Advancement of Science, and the National Research Council, each elect three trustees.

At the outset Science Service is equipped to act in the following capacities: as a clearing house for news of the scientific world; to supply special newspaper or periodical articles on scientific subjects of any sort; to cover special assignments for newspapers or periodicals in the field of science. Offices have been opened in the National Research Council Building, 1701 Massachusetts Avenue, Washington.

"Some Opportunities in Home Economics" a little four-page leaflet, has recently been brought out by the Department of Home Economics, of the University of Chicago. It is addressed to the women, experienced workers or young graduates, who today are asking as never before for definite information about lines of advancement in their fields or about selection of their life work. It is designed to help these women meet their desire to "fit themselves for the best possible service to the community and to find for themselves a well rounded, thoroughly interesting life."

The opportunities suggested and very briefly discussed are those in teaching—elementary and high school positions, supervision, normal school and university instructorships,—extension work, social work, business, hospital dietitians, writing, and homemaking as a profession. The Department of Home Economics will be glad to send copies of the leaflet to any one interested.

At the **Pageant of Progress Exposition** to be held on the Municipal Pier, Chicago, July 30 to August 14, Mrs. Minna Schmidt, who has studied the history of dress in Europe and the Orient, will illustrate the development of various styles from the times of the early Egyptians, through the Byzantine and Renaissance periods, up to the present day modes. The production of a garment from the weaving of the cloth to the cutting and sewing of it will be one of

the features. Models will be exhibited to point out why modern styles are popular and serviceable.

Progress in mechanical inventions and better methods in education and household management are to be emphasized in the Pageant.

The educational committee is under the leadership of Dr. David Kinley, President of the University of Illinois.

An International Conference on Child Welfare is to be held in Brussels, under the auspices of the Belgian government, July 18 to 21, 1921. American participation in the Conference is much desired by the Belgian Committee on Organization. The discussions will take up the subjects of Juvenile Delinquents and Juvenile Courts, Abnormal Children, Social Hygiene of Childhood, and War Orphans.

The New England Home Economics Association held its annual meeting, May 14, at Simmons College. Dr. Martin Edwards' address upon The Preservation of Health in Adult Life rounded out the year's study of health.

Dr. Edwards decribed the prevalent "fair to middlin" efficiency. Health means 100 per cent efficiency and this means strength enough for the job, for digestion, for recreation, and a surplus for the inevitable crises of life. Diet and posture are the two prime factors which govern health. Health requires relaxation but not necessarily of long duration. "It is not the load you carry but how you carry it."

The business meeting followed the address. The association voted to affiliate with the American Home Economics Association, and to contribute annually to the Ellen H. Richards Fund.

The subject for next year's work is to be The Relation of Home Economics to the Home.

This meeting closed a most active and prosperous year for the association.

Harvard University is offering a Course in Vocational Rehabilitation July 5 to August 12. Persons desirous of working under the Federal Board, as well as workers already in the field, who wish to prepare themselves for more successful work, will be interested in the course. The work is open to both men and women, to college graduates, and to those who have not obtained a college degree.

Teachers College, Columbia University, will give, in the summer session, a course in problems of the administrative dietitian, dealing with organization and equipment of diet kitchens, formula rooms, main kitchens and accessory departments; administrative duties of a dietitian; hospital routine and ethics; dietetics for nurses; pupil dietitian training. This course will be under the direction of Rena S. Eckman and Eleanor Wells.

NOTES

The American Home Economics Association participated in the ceremony when the National Women's Party presented to Congress Adelaide Johnson's statue of the three suffrage pioneers, Elizabeth Cady Stanton, Susan B. Anthony and Lucretia Mott. Jane Addams presided and Speaker Gillett accepted the statue on behalf of Congress. Eighty-five national women's organizations and those of six foreign countries, besides a number of local associations, were represented. The Washington, D. C., Home Economics Association and the American Home Economics Association were jointly represented in the ceremony by Anna Richardson, Emma Jacobs, and Ethel Ridgeway.

Two educational moving pictures films which serve a real purpose in connection with household arts are: "Making Soap", put out by Kirkman's Soap Company; and "Wash Day", by the Laundry Board of Trade, 711 Times Building, New York City.